REMARKS

Claims 1-29 are pending. Claims 1-13 and 15-29, due to a restriction requirement, are withdrawn from consideration. Claim 14 is objected to and is rejected under 35 U.S.C. § 112, first paragraph and 35 U.S.C. § 102. Applicants address each of these rejections as follows.

Claim Amendments

Claim 14 has been re-written in independent form to incorporate the features of the microarray of claim 12 (now canceled). In addition, claim 14, as amended, now encompasses contacting a mammalian or nematode cell with a candidate compound and detecting an alteration in cellular mRNA levels of at least two fat metabolism regulator nucleic acid molecules in the mammalian or nematode cell. Support for this amendment is found, for example, at page 108, line 39, to page 109, line 7, at page 109, lines 9-25, page 115, lines 9-14, and at page 126, line 5, to page 128, line 28, of the specification as filed.

Withdrawn claims 1-13 and 15-29 have been canceled.

New claims 30 and 31 have been added and find support, for example, at page 109, lines 9-25, and at page 126, line 5, to page 128, line 28, of the specification as filed.

Claim Objections

Claim 14 is objected to for depending from a non-elected claim and for containing a typographical error. Applicants submit that the amendments to claim 14 overcome these bases for objection.

Rejection under 35 U.S.C. § 112, first paragraph

Claim 14 is rejected under 35 U.S.C. § 112, first paragraph, based on the assertion that the scope of the claim is not commensurate with the enablement provided by the specification. In particular the Office states (pages 2 - 4):

> [T]he specification, while being enabling for a method of identifying a candidate compound capable of modulating fat metabolism comprising: (a) contacting a specific cell with a candidate compound; (b) obtaining mRNA from said cell; (c) contacting a microarray having specific fat metabolism nucleic acids ... with said mRNA ... Without sufficient guidance, identifying a candidate compound that modulates fat metabolism in any cell type using any microarray comprising any set of fat metabolism regulatory nucleic acids is unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. (Emphasis original)

Applicants submit that the claims, as amended, are free of this basis of rejection.

The method of claim 14, as amended, is directed to identifying a candidate compound that modulates fat metabolism and involves contacting a mammalian or a nematode cell with a candidate compound and using a microarray consisting of at least two mammalian or nematode fat metabolism regulator nucleic acids or fragments thereof. As such, the claimed method is not directed to use of any type of cell, but rather specific

cells, namely mammalian or nematode cells. Contacting mammalian or nematode cells with a candidate compound is standard in the art. Moreover, throughout the specification, Applicants teach contacting cells, including mammalian and nematode cells, with candidate compounds (see, e.g., page 126, line 5, to page 128, line 28). In particular, at page 24, line 6, to page 29, line 29, Applicants' specification teaches contacting nematode cells with Nile Red to detect intracellular fat droplets and at page 108, line 39, to page 109, line 7, Applicants' specification teaches contacting nematode cells with lovastatin, a compound that lowers cholesterol in humans.

In addition, the specification provides numerous examples of desirable mammalian cells that may be contacted with a candidate compound. For instance, at page 109, lines 11-14, the specification describes that the expression of fat metabolism regulator genes may be determined in hypothalamus or fat tissue of mice. The specification, for example, at page 110, lines 4-21, teaches that fat content can also be measured in cultured mammalian cell lines. For all the above reasons, Applicants submit that use of the specific cell types recited in claim 14, as amended, in the claimed methods is fully enabled by the specification as filed.

Furthermore, Applicants note that the microarray recited in claim 14, as amended, includes mammalian or nematode fat metabolism regulator nucleic acids and not any fat metabolism regulator nucleic acid. The specification, for example, in Tables IX – XIV, at pages 76-99, describes numerous mammalian and nematode fat metabolism regulator

nucleic acids. Also, for example, at page 109, the specification describes how one skilled in the art can generate microarrays containing mammalian or nematode fat metabolism regulator nucleic acids. Clearly, the specification enables one skilled in the art to make and use the microarray recited in claim 14, as amended.

In sum, there can be no question that the specification as filed enables one skilled in the art to make and use the method of claim 14, as amended, within its full scope. The specification not only describes contacting mammalian and nematode cells with candidate compounds, but also describes how one skilled in the art can make and use microarrays consisting of at least two mammalian or nematode fat metabolism regulator nucleic acids. The enablement rejection should be withdrawn.

Rejection under 35 U.S.C. § 102

Claim 14 is rejected under 35 U.S.C. § 102(b) as being anticipated by Gu et al. (U.S. Patent Application Publication No. US 2004/0197766 A1; "the '766 publication"). Applicants submit that claim 14, as amended, and its dependent claims are free of the anticipation rejection over the '766 publication.

To anticipate a claim, a single prior art reference must, either expressly or inherently, describe each and every element set forth in the claim. As noted above, the method of claim 14, as amended, requires detecting an alteration in cellular mRNA levels *of at least two* fat metabolism regulator nucleic acid molecules in the mammalian cell or

nematode cell contacted with the candidate compound compared to a control cell. The '766 application (and Yip and Wolfe, Life Sciences 66:91-103, 2000 also cited by the Office) fails to describe a method of identifying a candidate compound that modulates fat metabolism using a microarray consisting of at least two mammalian or nematode fat metabolism regulator nucleic acids or fragments thereof and detecting an alteration in cellular mRNA levels of at least two fat metabolism regulator nucleic acid molecules. The cited art fails to teach each and every element of claim 14, as amended, and, therefore, cannot anticipate the present claim. The § 102 rejection of claim 14 over the '766 application should be withdrawn.

CONCLUSION

Applicants submit that the application is now in condition for allowance, and this action is hereby respectfully requested.

Enclosed are a Petition to extend the period for replying to the Office Action for one (1) month, to and including July 3, 2006 and a check in payment of the required extension fee.

If there are any additional charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

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